

# Commonwealth of Massachusetts Executive Office of Energy & Environmental Affairs

# Department of Environmental Protection

Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

DEVAL L. PATRICK Governor

TIMOTHY P. MURRAY Lieutenant Governor RICHARD K. SULLIVAN JR. Secretary

> KENNETH L. KIMMELL Commissioner

Date Stamped April 11, 2013

Mr. Robert A. DeAngelis Precision Coating Company, Inc. 65 Sprague Street Hyde Park, Massachusetts 02136 RE: BOSTON
Transmittal No.

Transmittal No.: X253136 Application No.: *NE-13-003* 

Class: *SUBMIN* FMF No.: 499705 **AIR QUALITY PLAN** 

**APPROVAL** 

Dear Mr. DeAngelis:

The Massachusetts Department of Environmental Protection ("MassDEP"), Bureau of Waste Prevention, has reviewed your Limited Plan Application ("Application") listed above. This Application concerns the installation of three (3) new spray booths and three (3) associated drying ovens as well as the consolidation of some equipment from your existing facility located at 58 MacDonald Street in Dedham, Massachusetts to your existing facility located at 63 Sprague Street in Hyde Park, Massachusetts ("Facility"). On April 2, 2013, MassDEP received supplemental information from Precision Coating Company, Inc. on this Application.

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 "Air Pollution Control," regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-J, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP's review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner / operator ("Permittee") must comply in order for the Facility to be operated in compliance with this Plan Approval.

# 1. <u>DESCRIPTION OF FACILITY AND APPLICATION</u>

The Permittee operates the existing, medical device coating Facility which was approved via MBR-09-IND-016 by MassDEP on December 16, 2009. The existing, approved Facility has a total of two (2) paint spray booths (EU 1 and EU 2), a natural gas-fired drying oven (EU A), and two (2) electric ovens (EU B and EU C). The Permittee is proposing to relocate and upgrade three existing gas-fired drying ovens from another facility to this Facility. These emission units (EUs) will be designated as EU D, EU E, and EU H. The Permittee proposes to install up to three (3) new paint spray booths (EU 3, EU 4, and EU 5) and three (3) new electric drying ovens (EU F, EU G, and EU J). These EUs will emit volatile organic compounds (VOC), hazardous air pollutants (HAPs), and particulate matter (PM); all of which will be tracked. The VOC emissions from the combustion of natural gas in the four (4) natural gas-fired drying ovens will be also tracked and recorded separately by the Permittee.

# 2. EMISSION UNIT (EU) IDENTIFICATION

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

	Table 1				
EU#	Description	Location	Pollution Control Device (PCD)		
EU 1	Existing Global Finishing Solutions (GFS) Model # IFP-16B15 Spray Booth	Bay 9			
EU 2	Existing GFS Model # IFP-16B15 Spray Booth	Bay 9	Each paint spray booth shall utilize two or more layers of		
EU 3	Proposed GFS Model # IFP-IDOW-161014-P-S Spray Booth	Bay 6	dry fiber mat filter with a total thickness of at least two inches that achieves a particulate control efficiency		
EU 4	Proposed GFS Model # IFP-IDG-160812-SS Spray Booth	Bay 4	of at least 97% by weight.		
EU 5	Proposed GFS Spray Booth Model # To Be Determined Purchase/Installation Dependent on Future Business Needs	Bay 4			

	Table 1				
EU#	Description	Location	Pollution Control Device (PCD)		
EU A	Existing Custom Made Model # RCP-CR2-G-15 Natural Gas-fired Drying Oven 1.5 MMBtu/hr Maximum Firing Rate	Bay 7			
EU B	Existing Custom Made Model # TE-140 Electric Drying Oven	Bay 8			
EU C	Existing Custom Made Model # S-4-1,0000C Infra-red (IR) Electric Drying Oven	Bay 6			
EU D	Relocated Gehnrich Serial # 10527 Natural Gas-fired Drying Oven 1.5 MMBtu/hr Maximum Firing Rate	Bay 7	None		
EU E	Relocated Gehnrich Serial # 11111 Natural Gas-fired Drying Oven 800,000 Btu/hr Maximum Firing Rate	Bay 5			
EU F	Proposed Despatch Model # RFD2-35-2E Electric Drying Oven	Bay 5			
EU G	Proposed Blue M Model # CC-13W-P-HP Electric Drying Oven	Bay 5			
EU H	Relocated Gehnrich Serial # 9901 Natural Gas-fired Drying Oven 300,000 Btu/hr Maximum Firing Rate	Bay 5			
EU J	Proposed Blue M Model # IGF-7780-F-MP550 Electric Purge Oven	Bay 7			

**Table 1 Key:**EU = Emission Unit
# = Number

MMBtu/hr = million British thermal units per hour Btu/hr = British thermal units per hour

# 3. APPLICABLE REQUIREMENTS

# A. OPERATIONAL, PRODUCTION AND EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2, below:

Table 2				
EU# Operational / Production Limit		Air Contaminant	Emission Limit	
	Maximum VOC content of coating utilized by EU 1 shall not exceed 7.38 pounds per gallon.	VOC <sup>a</sup>	0.4 TPM 1.7 TPY	
EU 1		Total HAPs <sup>a</sup>	0.4 TPM 1.7 TPY	
		Total PM	0.2 TPM 0.8 TPY	
	Maximum VOC content of coating utilized by EU 2 shall not exceed 7.38 pounds per gallon.	VOC <sup>a</sup>	0.4 TPM 1.7 TPY	
EU 2		Total HAPs <sup>a</sup>	0.4 TPM 1.7 TPY	
		Total PM	0.2 TPM 0.8 TPY	
	Maximum VOC content of coating utilized by EU 3 shall not exceed 7.38 pounds per gallon.	VOC <sup>a</sup>	0.4 TPM 1.7 TPY	
EU 3		Total HAPs <sup>a</sup>	0.4 TPM 1.7 TPY	
		Total PM	0.2 TPM 0.8 TPY	

Table 2				
EU#	Operational / Production Limit	Air Contaminant	Emission Limit	
	Maximum VOC content of coating utilized by EU 4 shall not exceed 7.38 pounds per gallon.	VOC <sup>a</sup>	0.4 TPM 1.7 TPY	
EU 4		Total HAPs <sup>a</sup>	0.4 TPM 1.7 TPY	
		Total PM	0.2 TPM 0.8 TPY	
EU 5	Maximum VOC content of coating utilized by EU 4 shall not exceed 7.38 pounds per gallon.	VOC <sup>a</sup>	0.4 TPM 1.7 TPY	
		Total HAPs <sup>a</sup>	0.4 TPM 1.7 TPY	
		Total PM	0.2 TPM 0.8 TPY	
	N/A	VOC <sup>b</sup>	2.3 TPM 8.9 TPY	
Facility-		Total HAPs	2.3 TPM 8.5 TPY	
wide		Total PM	1.0 TPM 4.0 TPY	
		Opacity	0 Percent	

#### Table 2 Key:

EU# = Emission Unit Number

VOC = Volatile Organic Compounds

Total HAPs = total Hazardous Air Pollutants

Total PM = total Particulate Matter

TPM = tons per month

TPY = tons per any consecutive 12-month period

N/A = Not Applicable

#### **Table 2 Notes:**

<sup>&</sup>lt;sup>a</sup> = VOC and HAPs emissions from drying processes are totally accounted for in emissions tracking from each respective paint spray booth (EU 1 through EU 5) <sup>b</sup> = Facility-wide VOC emissions include VOC generated by the four natural-gas fired ovens

Precision Coating Company, Inc.
Plan Approval
Transmittal No. X253136
Application No. NE-13-003
Page 6 of 13

# B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5 below:

Table 3				
EU#	Monitoring and Testing Requirements			
EU 1, EU 2, EU 3,	1. Monitor material usage on a monthly basis such that records can be maintained of the Facility's emissions of VOC, total HAPs, and total PM to determine compliance status with the emission limits contained in Table 2 above.			
EU 4, EU 5, EU A, EU D, EU E,	2. Monitor VOC and HAPs content of each coating used at the Facility on a monthly basis such that records can be maintained to determine the compliance status of the Permittee with the Operational Limits detailed in Table 2 above.			
	3. Monitor pressure drop across each paint spray booth and replace dry mat filters as required by the Standard Operating and Maintence Procedures (SOMP) of the manufacturer.			
Facility- wide	4. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and Regulation 310 CMR 7.13.			

### Table 3 Key:

EU# = Emission Unit Number VOC = Volatile Organic Compounds

HAPs (total) = total Hazardous Air Pollutants

MassDEP = Massachusetts Department of Environmental Protection

USEPA = United States Environmental Protection Agency

Table 4			
EU#	Record Keeping Requirements		
EU 1, EU 2, EU 3, EU 4, EU 5	1. Record the pressure drop for each paint spray booth on a daily basis and record when the dry mat filters have been replaced for each corresponding paint spray booth.		

Precision Coating Company, Inc. Plan Approval Transmittal No. X253136 Application No. NE-13-003 Page 7 of 13

	Table 4				
EU#	Record Keeping Requirements				
	2. The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). These records shall be compiled no later than the 15 <sup>th</sup> day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at <a href="http://www.mass.gov/dep/air/approvals/aqforms.htm#report">http://www.mass.gov/dep/air/approvals/aqforms.htm#report</a> .				
	3. The Permittee shall maintain records of monitoring and testing as required by Table 3.				
Facility- wide	4. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMPs for the EUs approved herein on-site.				
	5. The Permittee shall maintain a record of routine maintenance activities performed on the approved EUs and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.				
	6. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates of the approved EUs and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.				
	7. Maintain records of facility operations such that information may be reported as required for compliance with 310 CMR 7.12.				
	8. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.				
	9. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.				

### Table 4 Key:

EU# = Emission Unit Number

EUs = emission units

SOMPs = Standard Operating and Maintenance Procedures

MassDEP = Massachusetts Department of Environmental Protection

USEPA = United States Environmental Protection Agency

Table 5				
EU#	Reporting Requirements			
	1. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a "Responsible Official" as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).			
Facility- wide	2. The Permittee shall notify the Northeast Regional Office of MassDEP, BWP Permit Chief by email at <a href="mailto:nero.air@state.ma.us">nero.air@state.ma.us</a> or fax 978-694-3499 as soon as possible, but no later than one (1) business day after discovery of any exceedance(s) of Table 2 requirement(s). A written report shall be submitted to the BWP Permit Chief within three (3) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).			
	3. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30 days from MassDEP's request.			
	4. The Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least 60 days prior to emission testing, for any emission testing as defined in Table 3 Monitoring and Testing Requirements.			
	5. The Permittee shall submit to MassDEP a final stack emission test results report, within 45 days after emission testing, for any emission testing as defined in Table 3 Monitoring and Testing Requirements.			
	6. The Permittee shall submit a Source Registration/Emission Statement form to MassDEP in accordance with the requirements of 310 CMR 7.12.			

#### Table 5 Key:

EU# = Emission Unit Number

CMR = Code of Massachusetts Regulations

MassDEP = Massachusetts Department of Environmental Protection

BWP = Bureau of Waste Prevention

# 3. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to, and shall comply with, the following special terms and conditions:

A. The Permittee shall comply with the Special Terms and Conditions as contained in Table 6 below:

Table 6				
EU#	Special Terms and Conditions			
	1. Each spray booth shall utilize two or more layers of dry fiber mat filter with a total thickness of at least two inches or an equivalent system as determined in writing by MassDEP and that achieves a particulate control efficiency of at least 97 percent (%) by weight. Filter material shall be disposed of in accordance with all applicable MassDEP regulations. In addition, the face velocity of air at each filter shall not exceed 200 feet per minute.			
EU 1, EU 2, EU 3, EU 4,	2. For non-plastic surface preparation, prior to coating, the VOC content of any surface preparation solution shall not exceed 1.67 pounds per gallon. This requirement is not applicable to cleanup solutions which are re-used as thinners/reducers for coatings. For surface preparation of plastic parts, the VOC content of the surface preparation solution shall not exceed 6.5 pounds of VOC per gallon.			
EU 5	3. The Permittee shall follow the Standard Operating and Maintenance Procedures (SOMPs) for the subject emission units so as to maintain their efficient operation and minimize emissions of VOC, total HAPs, and total PM.			
EU 5	4. The Permittee shall install this EU within two (2) years of the issuance date of this Approval. Upon installation, the Permittee shall notifiy the MassDEP, in writing, within ten (10) business days and provide MassDEP with the stack parameters of the subject EU as required in Table 7 below. If the Permittee does not install this EU within the two year period, then the Permittee shall submit a new plan application to MassDEP for review and approval prior to installing this EU.			
P 111	5. All cleaning rags used in conjunction with cleaning solutions shall be placed in tightly covered containers when not in use, and shall be collected for proper recycling or disposal.			
Facility- wide	6. All VOC and/or HAPs containing materials, such as solvents, inks, and clean-up solutions, shall be transported and stored in tightly covered containers. Any emissions associated with surface preparation and /or cleanup solutions shall be included in the monthly and 12 month rolling emissions calculations to determine the Permittee's compliance status with emission limits contained in Table 2 above.			
	7. The Permittee shall maintain an Environmental Logbook, or similar record keeping system, which shall document all actions associated with environmental issues and overall emissions changes at the Facility. The Permittee shall record information such as the result of federal, state, or local environmental inspections, and maintenance or corrective actions related to manufacturing. This Logbook, or similar, shall be made available to MassDEP personnel upon request.			
	8. This Final Approval, NE-13-003, supercedes Final Approval, MBR-09-IND-016, dated December 16, 2009, in its entirety.			

#### Table 6 Key:

EU# = Emission Unit Number

B. The Permittee shall install and utilize an exhaust stack, as required in Table 7, for EU 1 through EU 5 and EU A through EU H, plus EU J, that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. The subject emission units shall utilize an exhaust stack with the following parameters, as contained in Table 7 below:

Table 7				
EU#	Stack Height Above Roof	Stack Inside Exit Dimensions	Stack Gas Exit Velocity	Stack Gas Exit Temperature Range
EU 1	10 feet	30 inch diameter	54 feet per second	68 °F – 98 °F
EU 2	10 feet	30 inch diameter	54 feet per second	68 °F – 98 °F
EU 3	10 feet	30 inch diameter	54 feet per second	68 °F – 98 °F
EU 4	10 feet	30 inch diameter	54feet per second	68 °F – 98 °F
EU A	10 feet	8 inch diameter	57 feet per second	100 °F – 700 °F
EU B	10 feet	6 inch diameter	80 feet per second	100 °F – 400 °F
EU C	10 feet	6 inch diameter	80 feet per second	100 °F – 400 °F
EU D	10 feet	8 inch diameter	57 feet per second	100 °F – 700 °F
EU E	10 feet	8 inch diameter	57 feet per second	100 °F – 700 °F
EU F	10 feet	6 inch diameter	80 feet per second	100 °F – 400 °F
EU G	10 feet	6 inch diameter	80 feet per second	100 °F – 400 °F
EU H	10 feet	8 inch diameter	57 feet per second	100 °F – 700 °F
EU J	10 feet	6 inch diameter	80 feet per second	100 °F – 400 °F

Table 7 Kev:

EU# = Emission Unit Number

°F = Degrees Fahrenheit

# 6. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.

Precision Coating Company, Inc.
Plan Approval
Transmittal No. X253136
Application No. NE-13-003
Page 11 of 13

- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and/or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.
- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.
- J. The Permittee shall conduct emission testing, if requested by MassDEP, in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13. If required, a pretest protocol report shall be submitted to MassDEP at least 30 days prior to emission testing and the final test results report shall be submitted within 45 days after emission testing.
- K. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

Precision Coating Company, Inc.
Plan Approval
Transmittal No. X253136
Application No. NE-13-003
Page 12 of 13

# 7. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain "Fail-Safe Provisions," which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

### 8. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Precision Coating Company, Inc.
Plan Approval
Transmittal No. X253136
Application No. NE-13-003
Page 13 of 13

Should you have any questions concerning this Plan Approval, please contact Mr. Mun Wong by telephone at 978-694-3286, or in writing at the letterhead address.

Sincerely,

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Mun S. Wong Environmental Engineer This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

James E. Belsky Permit Chief Bureau of Waste Prevention